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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,818	06/26/2003	Singee Cheah	AIR-14134US1	5501
40854	7590	04/29/2005	EXAMINER	
RANKIN, HILL, PORTER & CLARK LLP 4080 ERIE STREET WILLOUGHBY, OH 44094-7836			MULLER, BRYAN R	
			ART UNIT	PAPER NUMBER
			3723	
DATE MAILED: 04/29/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/606,818

Applicant(s)

CHEAH, SINGEE

Examiner

Bryan R Muller

Art Unit

3723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 25-39 is/are rejected.
- 7) ☐ Claim(s) 36 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 June 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the method of processing two **or more** groups of work pieces must be shown or the feature(s) canceled from the claim(s). The current drawings show how two groups of work pieces may be clamped and processed but do not show how more than two groups may be clamped and processed. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. Claim 37 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 37 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: Claim 37 discloses that changing the first and second **upper** jaws will provide each of the first and second **lower** jaws with different templates. It is unclear how a change to the upper jaws will effect the lower jaws. It is assumed by the examiner that the claim is supposed to read that changing the first and second **upper** jaws will provide each of the first and second **upper** jaws with different templates and will be treated as such for the sake of the current office action.

4. Claim 36 recites the limitation "upper portion" in line 3. There is insufficient antecedent basis for this limitation in the claim. It is assumed by the examiner that the "upper portion" is intended to be the "upper anchor portion" and will be treated as such for the sake of the current office action.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 25-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maes (3,982,739).

7. In reference to claim 25, Maes discloses a method of processing two work pieces comprising the steps of providing a work piece location, positioning a clamp device about the work piece location in order to clamp the two work pieces, providing the clamp device with a lower clamp unit and an upper clamp unit, providing the lower clamp unit of each clamp device with a pair of lower jaws (13 and 1 or 22), at least one of the lower jaws being movable relative to the other of the lower jaws between a clamped position and an unclamped position, actuating the lower clamp unit to clamp a first work piece by moving at least one of the lower jaws relative to the other of the lower jaws between the clamped and unclamped positions, firstly to receive the first work piece, and secondly to clamp the first work piece at a first elevation, providing the upper clamp unit with a pair of upper jaws (13 and 1 or 22), at least one of the upper jaws being movable relative to the other of the upper jaws between a clamped position and an unclamped position, actuating the upper clamp unit to clamp a second work piece by moving at least one of the upper jaws relative to the other of the upper jaws between the clamped and

unclamped positions, thirdly to receive the second work piece, and fourthly to clamp the second work piece at a second elevation, the second elevation being oriented above the first elevation. Maes however, fails to disclose that a number of clamp devices may be positioned around the work piece location in order to clamp two or more groups of work pieces but it would have been obvious to one of ordinary skill in the art at the time the invention was made that it would be advantageous to provide multiple clamp devices because the Maes clamping device is made to clamp pipe members, that are often times very long and would require more than one support point, thus making it necessary to provide at least a second clamping device, if not more, to properly support a first and second length of pipe. Maes also discloses that the device may be used by pipe fitters and welders (col. 2, lines 44-46) who would inherently be using the clamp devices to support two or more pairs of work pieces to weld or fit them together, thus making it obvious that a plurality of the clamping devices of Maes would be used together to process two or more groups of work pieces.

8. In reference to claim 26, in addition to the obvious method of processing two or more groups of work pieces, as discussed supra, Maes further discloses the step of rendering the upper clamp unit inoperable during actuation of the lower clamp unit by removing one of the upper jaws.

9. In reference to claims 27 and 28, in addition to the obvious method of processing two or more groups of work pieces, as discussed supra, Maes further discloses that, "when the screw clamp is tightened... the piece being worked on is nested in a level or plumb position". The fact that the work piece is referred to as, "the piece being worked

on", provides the step of conducting at least one process operation on each of the first and second groups of work pieces. It is also well known in the art that clamps are most often used to support a work piece while a process operation is performed on the work piece.

10. In reference to claim 29, in addition to the obvious method of processing two or more groups of work pieces, as discussed supra, Maes further discloses the step of locating one of the upper jaws and one of the lower jaws (1 or 22) between the first and second elevations.

11. In reference to claim 30, in addition to the obvious method of processing two or more groups of work pieces, as discussed supra, Maes further discloses the step of joining together the upper and lower jaws located between the upper and lower elevations.

12. In reference to claim 31, in addition to the obvious method of processing two or more groups of work pieces, as discussed supra, Maes further discloses the step of offsetting one of the clamp units at an angle relative to the other clamp units on selected ones of said clamp devices. As shown in fig. 2, Maes provides the step of offsetting one of the clamp units at an angle relative to the other clamp by changing one of the clamp units jaws 13 cooperating with an upper or lower jaw of 1, to cooperating with jaw 6 and using the remaining portion of jaw 1 as the support.

13. In reference to claim 32, in addition to the obvious method of processing two or more groups of work pieces, as discussed supra, in a first embodiment Maes further discloses the steps of providing a support frame member (6 in fig. 1) adjacent the work

piece location, mounting a lower anchor portion (4 and 1) on the support frame member and pivotally mounting a first of the lower jaws (27) of the lower clamp unit for movement relative to the lower anchor portion.

14. In reference to claim 33, in addition to the obvious method of processing two or more groups of work pieces, as discussed supra, also in the first embodiment, Maes further discloses the steps of indirectly mounting a second lower jaw (13) to the lower anchor portion (4 and 1) with the support member (11).

15. Claims 32, 33, 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maes (3,982,739) in view of Mahannah (2,019,789).

16. In reference to claim 32, in a second embodiment, wherein the first lower jaw (27) is removed and the lower portion of 1 is the first lower jaw, Maes discloses the steps of providing a support frame member (6) adjacent the work piece location, mounting a lower anchor (4) portion on the support frame member and mounting a first one of the lower jaws of the lower clamp to the lower anchor portion but fails to disclose that the first one of the lower jaws is *pivotaly* mounted for movement relative to the lower anchor portion. Mahannah discloses an adjustable mount for clamps which provides a support frame member (8) and a lower anchor portion (7) and pivotally mounts the entire clamp to the lower anchor portion using arms (1 and 2) and pivot points (4, 18 and 21) to allow movement relative to the lower anchor portion and teaches that the attachment allows the connecting member to vary in length, rock and move the clamp to a desired position for the convenience of the operator while working

on an object (col. 1, lines 20-27). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to mount the clamping mechanism of Maes to the support frame member (6) with a mounting arm similar to the one disclosed by Mahannah such that the a lower anchor portion (7 of Mahannah) is mounted to the support frame member (6) and the first of the lower jaws (lower portion of 1) is pivotally mounted to the lower anchor portion through the pivoting movable arms so that the clamping device of Maes may vary in length, rock and move the clamp to a desired position for the convenience of the operator while working on an object, as taught by Mahannah.

17. In reference to claim 33, the second lower jaw (lower 13) of Maes is mounted to the first lower jaw through support member (11) and is thus indirectly mounted to the lower anchor portion, therefore, the obvious combination of Maes and Mahannah provides the step of mounting a second lower jaw to the lower anchor portion.

18. In reference to claim 35, the first upper jaw (upper portion of 1) of Maes is mounted to the first lower jaw of Maes (lower portion of 1), therefore, the obvious combination of Maes and Mahannah provides the step of mounting a first upper jaw on the first lower jaw.

19. In reference to claim 36, the mounting arm of Mahannah comprises an upper anchor portion (6) which is mounted on the support frame member indirectly by the lower anchor portion and the second upper jaw (upper 13) of Maes is indirectly mounted to the first upper jaw through support member (11), therefore the obvious combination of Maes and Mahannah provides the steps of mounting an upper anchor portion on the

support frame member and pivotally mounting a second of the upper jaws (upper 13) for movement relative to the upper (anchor) portion.

20. Claims 34 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maes (3,982,739) in view of Mahannah (2,019,789) as applied to claims 32 and 36, respectively and further in view of Strotz (2,432,352).

21. Maes discloses that the first upper and lower jaws may be changed by adding grips (19) for round objects or blocks (22) for flat object to provide different templates for different groups of work pieces but the obvious method of processing two or more groups of work pieces as disclosed by the combination of Maes and Mahannah, as discussed supra, fails to disclose the steps of changing the first **and** second upper or lower jaws to provide each of the first and second upper or lower jaws, respectively, with different templates for different groups of work pieces. Strotz discloses a screw clamp wherein both jaws of the clamp are replaceable to provide different templates for round or flat objects and the ability to change both jaws on the clamp allows for more surface contact with the selected work piece and thus, a better grip on the work piece. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the second upper and lower jaws of Maes interchangeable to provide a better grip on objects of different shapes and sizes.

22. Claims 38 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maes (3,982,739) in view of Araki et al (6,003,851).

23. In reference to claim 38, Maes discloses the method of processing two or more groups of work pieces, as discussed supra, and that the clamping device has threaded manually operated actuators but fails to disclose that the actuators may be linear or rotary, hydraulic or pneumatic drive members. Araki discloses a clamping mechanism wherein the actuating means is any suitable means including screw, ball screw, hydraulic or pneumatic devices, etc. (col. 7, lines 21-23) thus, teaching that hydraulic or pneumatic devices are an acceptable replacement for a screw drive, such as the one disclosed by Maes. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the screw type actuator of Maes may be replaced with a hydraulic or pneumatic actuator, as taught by Araki. It further would have been obvious that a linear or rotary actuator would be the only type that may operate the clamping device of Maes.

24. In reference to claim 39, it further would have been obvious that a linear or rotary, hydraulic or pneumatic actuator would require a controller for controlling the actuator and the controls would comprise a first phase to actuate the lower clamp unit between unclamped and clamped positions, a second phase to actuate the second upper clamp member between the unclamped and inoperative positions, and a third phase to actuate the upper clamp unit be between the unclamped and clamped positions.

Response to Arguments

25. Applicant's arguments filed 2/11/2005 have been fully considered but they are not persuasive. It would have been obvious to use more than one of the Maes clamping

devices to clamp two or more groups of work pieces, as discussed supra in reference to claim 25.

Request for Additional Information

26. Applicant's disclosure of prior use filed 2/11/2005 lacks sufficient information to determine if the prior use is relevant as a reference over the current application. It is requested that applicant provide answers to the following questions with any further actions relating to the claimed invention:

- a. Was the claimed method in use **solely** by the applicant?
 - i. If no, how does applicant know of the prior use?
 - ii. If no, is there any documentation (published or unpublished) of the prior use?
 - iii. If no, who (else) practiced the claimed method?
- b. When was the claimed method or apparatus used to practice the method **first** in use?
 - iv. Is there any documentation (published or unpublished) of the first use?
- c. Was the applicant the **sole** inventor of the claimed invention?
- d. Has there been any attempt to obtain a patent or has a patent been obtained for the claimed invention in any other country?
 - v. If yes, when?
 - vi. If yes, by who?

- e. Has there been any sale or offer of sale of the claimed method or the apparatus used to practice the method by applicant or other?
- vii. If yes, is there any documentation (published or unpublished) of any transaction or offer that was made?

Conclusion

27. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan R Muller whose telephone number is (571) 272-

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4489. The examiner can normally be reached on Monday thru Thursday and second Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph J Hail III can be reached on (571) 272-4485. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BRM BRM
5/26/2005



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